ABSTRACT

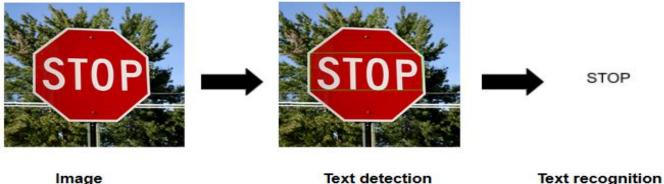**Title of the project** : OCR TEXT DETECTION AND RECOGNITION

| Image | Text detection | Text recognition |

Idea of the project:

Aim : The aim of this project is to develop such a tool which takes an Image as input and extract characters (alphabets, digits, symbols) from it. The Image can be of handwritten document or Printed document. It can be used as a form of data entry from printed records.

Tool : This project is based on Machine learning, We can provide a lot of data set as an Input to the software tool which will be recognized by the machine and similar pattern will be taken out from them. We will use Python as its free and easy to use.

Research : A lot of research is going on this product and which is still going on. Research areas include image processing, natural language processing, artificial Intelligence and machine learning.

Implementation : OCR has two parts to it. The first part is **text detection** where the textual part within the image is determined. This localization of text within the image is important for the second part of OCR, **text recognition**, where the text is extracted from the image. Using these techniques together is how we can extract text from any image.

Applications : OCR is used for **handwriting recognition tasks** to extract information , **digitization** by various industries to cut down manual workload , **book scanning** where it turns raw images into a digital text format.

In this project the input will be the image containing the text and the output will be the text embedded in the image

Conclusion : The main purpose for building such a system was to fulfill the needs of growing content-based multimedia indexing, retrieval and management. I constructed the whole system using sub-tasks: the localization task and the verification task in text detection and the segmentation task, the character recognition task and the temporal processing task in text recognition.